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COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Sub-Committee of Experts on the Transport of Dangerous Goods
(Thirteenth session,
Geneva, 7-17 July 1997,
agenda item (3 (d))

DRAFT AMENDMENTS TO THE MODEL REGULATIONS ON THE TRANSPORT OF DANGEROUS GOODS

Other draft amendments

Human experience

Transmitted by the Expert of the United Kingdom

Background:

At the seventeenth session of the Committee of Experts (7-16 December 1992) the Expert from the United States submitted a document INF 24 titled "Information paper: Listing and classification of Division 6.1 Poisonous (Toxic) substances based on human experience". The document listed specific substances which were indicated to be ".....substances classified on the basis of human experience....identified in United States regulations".

At the ninth session of the Sub-Committee of experts (4-15 July 1994) the Hazardous Materials Advisory Council (HMAC) submitted a proposal on the classification of dangerous goods based on "human experience" (ST/SG/AC.10/C.3/R.488). Subsequently, at the tenth session of the Sub-Committee (10-20 July 1995), HMAC offered to:

(a) Identify substances which are listed in the Dangerous Goods List of the Recommendations and which were classified on the basis of human experience; and

At the twelfth session of the Sub-Committee (1-12 July 1996), HMAC submitted a further proposal on the classification of dangerous goods based on "human experience" (ST/SG/AC.10/C.3/R.767 and -/Corr.1 and -/Corr.2). Several Experts indicated they might support the idea of identifying substances classified on the basis of human experience by a special provision and the Chairman asked HMAC if it would prepare a more fully developed submission for the nineteenth session of the Committee (2-11 December 1996). This document, ST/SG/AC.10/R.540, was subsequently considered by the Committee.

The Committee decided not to adopt the proposal by HMAC concerning the classification of solutions and mixtures. However, it did agree to insert a new special provision in the entries mentioned in the appendix to the document, specifying that the substances covered by these entries had been classified on the basis of human experience.

Justification:

It is noted that the list of entries mentioned in the appendix to ST/SG/AC.10/R.540 was not intended to be exhaustive. The expert from the United Kingdom would not wish to see such a list proliferate. However, he considers that it would be sensible to apply the special provision to additional entries where toxicity data suggests very clearly that the substances mentioned in those entries were classified on the basis of human experience.

Proposal:

Apply special provision 279 to the following entries: UN 1710 Trichloroethylene, UN 1846 Carbon Tetrachloride, UN 1888 Chloroform, UN 1897 Tetrachloroethylene, UN 2831 1,1,1 - Trichloroethane.

Supporting data:

The current available data for these substances (which are all halogenated hydrocarbons) is as follows:-

UN	SUBSTANCE	LD_{50} orl-rat (mg/kg)	LD_{50} skn-rbt (mg/kg)	LD_{50} ihl rat (ml/m^3)
1710	TRICHLOROETHYLENE	5650	>20000	16900 a/
1846	CARBON TETRACHLORIDE	2350	>20000	16000
1888	CHLOROFORM	908	>20000	19540
1897	TETRACHLOROETHYLENE	2629	>3228 b/	5042 c/
2831	1,1,1-TRICHLOROETHANE	9600	15800 d/	36000

a/ This is a "mouse (mus)" figure, not a rat.

b/ The literature reference refers to a "Lethal dose (LD)" rather than "LD_{50}"

c/ This is an eight hour figure.

d/ This is a LD_{LO} rather than LD_{50} figure.